

SEQUENCE LISTING

<110> Turner, C. Alexander Jr.
 Hilbun, Erin
 Donoho, Gregory
 Scoville, John
 Wattler, Frank
 Friedrich, Glenn
 Abuin, Alejandro
 Zambrowicz, Brian
 Sands, Arthur T.

<120> Novel Human Neurexin-like Proteins and Polynucleotides Encoding the Same

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CCDS: C12345.1 (1307) Homo sapiens

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Thr Gly Arg Asn Trp Lys Gln Tyr Lys Gln Glu Asp Ser Ile Trp Thr
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His Ser Val Arg Ala Arg Phe Val Arg Phe Val Pro Leu Glu Trp Asn
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Pro Ser Gly Lys Ile Gly Met Arg Val Glu Val Tyr Gly Cys Ser Tyr
165 170 175
Lys Ser Asp Val Ala Asp Phe Asp Gly Arg Ser Ser Leu Leu Tyr Arg
180 185 190
Phe Asn Gln Lys Leu Met Ser Thr Leu Lys Asp Val Ile Ser Leu Lys
195 200 205
Phe Lys Ser Met Gln Gly Asp Gly Val Leu Phe His Gly Glu Gly Gln
210 215 220
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His Leu Asn Leu Gly Asp Ser Lys Ala Arg Leu Ser Ser Ser Leu Pro
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305 310 315 320
Phe Leu Lys Lys Asn Phe His Gly Cys Ile Glu Asn Leu Tyr Tyr Asn
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Gly Val Asn Ile Ile Xaa Leu Ala Lys Arg Arg Lys His Gln Ile Tyr
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Thr Val Gly Asn Val Thr Phe Ser Cys Ser Glu Pro Gln Ile Val Pro
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Ile Thr Phe Val Asn Ser Ser Gly Ser Tyr Leu Leu Leu Pro Gly Thr
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Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
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165     170     175
Lys Ser Asp Val Ala Asp Phe Asp Gly Arg Ser Ser Leu Leu Tyr Arg
180     185     190
Phe Asn Gln Lys Leu Met Ser Thr Leu Lys Asp Val Ile Ser Leu Lys
195     200     205
Phe Lys Ser Met Gln Gly Asp Gly Val Leu Phe His Gly Glu Gly Gln
210     215     220
Arg Gly Asp His Ile Thr Leu Glu Leu Gln Lys Gly Arg Leu Ala Leu
225     230     235     240
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245     250     255
Ser Ala Thr Leu Gly Ser Leu Leu Asp Asp Gln His Trp His Xaa Val
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275     280     285
Thr Gln His Phe Arg Thr Lys Gly Glu Thr Asp Ala Leu Asp Ile Asp
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Tyr Glu Gly Asn Val Thr Phe Ser Cys Ser Glu Pro Gln Ile Val Pro
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Ile	Thr	Phe	Val	Asn	Ser	Ser	Gly	Ser	Tyr	Leu	Leu	Leu	Pro	Gly	Thr		
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Cys	Ser	Ile	Lys	Asp	Arg	Cys	Leu	Pro	Asn	Tyr	Cys	Glu	His	Gly	Gly		
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Ser	Cys	Ser	Gln	Ser	Trp	Thr	Thr	Phe	Tyr	Cys	Asn	Cys	Ser	Asp	Thr		
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Ser	Tyr	Thr	Gly	Ala	Thr	Cys	His	Asn	Ser	Ile	Tyr	Glu	Gln	Ser	Cys		
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Glu	Val	Tyr	Arg	His	Gln	Gly	Asn	Thr	Ala	Gly	Phe	Phe	Tyr	Ile	Asp		
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Thr	Glu	Asp	Lys	Ile	Trp	Thr	Ser	Val	Gln	His	Asn	Asn	Thr	Glu	Leu		
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Thr	Arg	Val	Arg	Gly	Ala	Asn	Pro	Glu	Lys	Pro	Tyr	Ala	Met	Ala	Leu		
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Asp	Tyr	Gly	Gly	Ser	Met	Glu	Gln	Leu	Glu	Ala	Val	Ile	Asp	Gly	Ser		
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Glu	His	Cys	Glu	Gln	Glu	Val	Ala	Tyr	His	Cys	Arg	Arg	Ser	Arg	Leu		
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Leu	Asn	Thr	Pro	Asp	Gly	Thr	Pro	Phe	Thr	Trp	Trp	Ile	Gly	Arg	Ser		
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Asn	Glu	Arg	His	Pro	Tyr	Trp	Gly	Gly	Ser	Pro	Pro	Gly	Val	Gln	Gln		
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Cys	Glu	Cys	Gly	Leu	Asp	Glu	Ser	Cys	Leu	Asp	Ile	Gln	His	Phe	Cys		
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Asn	Cys	Asp	Ala	Asp	Lys	Asp	Glu	Trp	Thr	Asn	Asp	Thr	Gly	Phe	Leu		
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Ser	Phe	Lys	Asp	His	Leu	Pro	Val	Thr	Gln	Ile	Val	Ile	Thr	Asp	Thr		
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Asp	Arg	Ser	Asn	Ser	Glu	Ala	Ala	Trp	Arg	Ile	Gly	Pro	Leu	Arg	Cys		
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Tyr	Gly	Asp	Arg	Arg	Phe	Trp	Asn	Ala	Val	Ser	Phe	Tyr	Thr	Glu	Ala		
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Ser	Tyr	Leu	His	Phe	Pro	Thr	Phe	His	Ala	Glu	Phe	Ser	Ala	Asp	Ile		
	755					760						765					

Ser	Phe	Phe	Phe	Lys	Thr	Thr	Ala	Leu	Ser	Gly	Val	Phe	Leu	Glu	Asn	770	775	780
Leu	Gly	Ile	Lys	Asp	Phe	Ile	Arg	Leu	Glu	Ile	Ser	Ser	Pro	Ser	Glu	785	790	795
Ile	Thr	Phe	Ala	Ile	Asp	Val	Gly	Asn	Gly	Pro	Val	Glu	Leu	Val	Val	805	810	815
Gln	Ser	Pro	Ser	Leu	Leu	Asn	Asp	Asn	Gln	Trp	His	Tyr	Val	Arg	Ala	820	825	830
Glu	Arg	Asn	Leu	Lys	Glu	Thr	Ser	Leu	Gln	Val	Asp	Asn	Leu	Pro	Arg	835	840	845
Ser	Thr	Arg	Glu	Thr	Ser	Glu	Glu	Gly	His	Phe	Arg	Leu	Gln	Leu	Asn	850	855	860
Ser	Gln	Leu	Phe	Val	Gly	Gly	Thr	Ser	Ser	Arg	Gln	Lys	Gly	Phe	Leu	865	870	875
Gly	Cys	Ile	Arg	Ser	Leu	His	Leu	Asn	Gly	Gln	Lys	Met	Asp	Leu	Glu	885	890	895
Glu	Arg	Ala	Lys	Val	Thr	Ser	Gly	Val	Arg	Pro	Gly	Cys	Pro	Gly	His	900	905	910
Cys	Ser	Ser	Tyr	Gly	Ser	Ile	Cys	His	Asn	Gly	Gly	Lys	Cys	Val	Glu	915	920	925
Lys	His	Asn	Gly	Tyr	Leu	Cys	Asp	Cys	Thr	Asn	Ser	Pro	Tyr	Glu	Gly	930	935	940
Pro	Phe	Cys	Lys	Lys	Glu	Val	Ser	Ala	Val	Phe	Glu	Ala	Gly	Thr	Ser	945	950	955
Val	Thr	Tyr	Met	Phe	Gln	Glu	Pro	Tyr	Pro	Val	Thr	Lys	Asn	Ile	Ser	965	970	975
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Ile	Asn	Ser	Ser	Ser	Gln	Asp	Phe	Val	Val	Val	Leu	Leu	Cys	Lys	Asn	1010	1015	1020
Gly	Ser	Leu	Gln	Val	Arg	Tyr	His	Leu	Asn	Lys	Glu	Glu	Thr	His	Val	1025	1030	1035
Phe	Thr	Ile	Asp	Ala	Asp	Asn	Phe	Ala	Asn	Arg	Arg	Met	His	His	Leu	1045	1050	1055
Lys	Ile	Asn	Arg	Glu	Gly	Arg	Glu	Leu	Thr	Ile	Gln	Met	Asp	Gln	Gln	1060	1065	1070
Leu	Arg	Leu	Ser	Tyr	Asn	Phe	Ser	Pro	Glu	Val	Glu	Phe	Arg	Val	Ile	1075	1080	1085
Arg	Ser	Leu	Thr	Leu	Gly	Lys	Val	Thr	Glu	Asn	Leu	Gly	Leu	Asp	Ser	1090	1095	1100
Glu	Val	Ala	Lys	Ala	Asn	Ala	Met	Gly	Phe	Ala	Gly	Cys	Met	Ser	Ser	1105	1110	1115
Val	Gln	Tyr	Asn	His	Ile	Ala	Pro	Leu	Lys	Ala	Ala	Leu	Arg	His	Ala	1125	1130	1135
Thr	Val	Ala	Pro	Val	Thr	Val	His	Gly	Thr	Leu	Thr	Glu	Ser	Ser	Cys	1140	1145	1150
Gly	Phe	Met	Val	Asp	Ser	Asp	Val	Asn	Ala	Val	Thr	Thr	Val	His	Ser	1155	1160	1165
Ser	Ser	Asp	Pro	Phe	Gly	Lys	Thr	Asp	Glu	Arg	Glu	Pro	Leu	Thr	Asn	1170	1175	1180
Ala	Val	Arg	Ser	Asp	Ser	Ala	Val	Ile	Gly	Gly	Val	Ile	Ala	Val	Val	1185	1190	1195
Ile	Phe	Ile	Ile	Phe	Cys	Ile	Ile	Gly	Ile	Met	Thr	Arg	Phe	Leu	Tyr	1205	1210	1215

Gln His Lys Gln Ser His Arg Thr Ser Gln Met Lys Glu Lys Glu Tyr
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 Pro Glu Asn Leu Asp Ser Ser Phe Arg Asn Glu Ile Asp Leu Gln Asn
 1235 1240 1245
 Thr Val Ser Glu Cys Lys Arg Glu Tyr Phe Ile
 1250 1255

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 <212> DNA
 <213> homo sapiens

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<210> 6
 <211> 35
 <212> PRT
 <213> homo sapiens

<400> 6
 Met Asp Ser Leu Pro Arg Leu Thr Ser Val Leu Thr Leu Leu Phe Ser
 1 5 10 15
 Gly Leu Trp His Leu Gly Leu Thr Ala Thr Asn Tyr Leu Cys Arg Lys
 20 25 30
 His Glu Cys
 35

<210> 7
 <211> 753
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 <212> PRT
 <213> homo sapiens

<400> 8
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			20					25					30				
Pro	Leu	Ala	Ser	Leu	Leu	Ser	Pro	Met	Ala	Phe	Ser	Ser	Ser	Ser	Asp		
		35					40					45					
Leu	Thr	Gly	Thr	His	Ser	Pro	Ala	Gln	Leu	Asn	Trp	Arg	Val	Gly	Thr		
	50				55					60							
Gly	Gly	Trp	Ser	Pro	Ala	Asp	Ser	Asn	Ala	Gln	Gln	Trp	Leu	Gln	Met		
65				70				75						80			
Asp	Leu	Gly	Asn	Arg	Val	Glu	Ile	Thr	Ala	Val	Ala	Thr	Gln	Gly	Arg		
			85					90					95				
Tyr	Gly	Ser	Ser	Asp	Trp	Val	Thr	Ser	Tyr	Ser	Leu	Met	Phe	Ser	Asp		
		100					105					110					
Thr	Gly	Arg	Asn	Trp	Lys	Gln	Tyr	Lys	Gln	Glu	Asp	Ser	Ile	Trp	Thr		
	115				120			125									
Phe	Ala	Gly	Asn	Met	Asn	Ala	Asp	Ser	Val	Val	His	His	Lys	Leu	Leu		
130					135			140									
His	Ser	Val	Arg	Ala	Arg	Phe	Val	Arg	Phe	Val	Pro	Leu	Glu	Trp	Asn		
145			150					155						160			
Pro	Ser	Gly	Lys	Ile	Gly	Met	Arg	Val	Glu	Val	Tyr	Gly	Cys	Ser	Tyr		
			165				170						175				
Lys	Ser	Asp	Val	Ala	Asp	Phe	Asp	Gly	Arg	Ser	Ser	Leu	Leu	Tyr	Arg		
		180					185					190					
Phe	Asn	Gln	Lys	Leu	Met	Ser	Thr	Leu	Lys	Asp	Val	Ile	Ser	Leu	Lys		
	195						200				205						
Phe	Lys	Ser	Met	Gln	Gly	Asp	Gly	Val	Leu	Phe	His	Gly	Glu	Gly	Gln		
210				215				220									
Arg	Gly	Asp	His	Ile	Thr	Leu	Glu	Leu	Gln	Lys	Gly	Arg	Leu	Ala	Leu		
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His	Leu	Asn	Leu	Val	Val	Cys	Ser	Ser	Pro								
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<210> 9

<211> 840

<212> DNA

<213> homo sapiens

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gacctgggaa	acagagtaga	gattacagca	gtggccacgc	aggggaagata	cggaagctct	300
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cacctcaatt	tgggtgacag	caaagcgcg	ctaagcactt	gccctctgcc	accctgggca	780
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<210> 10

<211> 279

<212> PRT

<213> homo sapiens

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<223> Xaa = Any Amino Acid

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Pro Leu Ala Ser Leu Leu Ser Pro Met Ala Phe Ser Ser Ser Ser Asp
35 40 45
Leu Thr Gly Thr His Ser Pro Ala Gln Leu Asn Trp Arg Val Gly Thr
50 55 60
Gly Gly Trp Ser Pro Ala Asp Ser Asn Ala Gln Gln Trp Leu Gln Met
65 70 75 80
Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
85 90 95
Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp
100 105 110
Thr Gly Arg Asn Trp Lys Gln Tyr Lys Gln Glu Asp Ser Ile Trp Thr
115 120 125
Phe Ala Gly Asn Met Asn Ala Asp Ser Val Val His His Lys Leu Leu
130 135 140
His Ser Val Arg Ala Arg Phe Val Arg Phe Val Pro Leu Glu Trp Asn
145 150 155 160
Pro Ser Gly Lys Ile Gly Met Arg Val Glu Val Tyr Gly Cys Ser Tyr
165 170 175
Lys Ser Asp Val Ala Asp Phe Asp Gly Arg Ser Ser Leu Leu Tyr Arg
180 185 190
Phe Asn Gln Lys Leu Met Ser Thr Leu Lys Asp Val Ile Ser Leu Lys
195 200 205
Phe Lys Ser Met Gln Gly Asp Gly Val Leu Phe His Gly Glu Gly Gln
210 215 220
Arg Gly Asp His Ile Thr Leu Glu Leu Gln Lys Gly Arg Leu Ala Leu
225 230 235 240
His Leu Asn Leu Gly Asp Ser Lys Ala Arg Leu Ser Thr Cys Pro Leu
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Pro Pro Trp Ala Ala Ser Trp Met Thr Ser Thr Gly Thr Xaa Ser Ser
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Leu Ser Gly Trp Ala Ser Arg
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<210> 11

<211> 1749

<212> DNA

<213> homo sapiens

<400> 11

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ggcagcctcc tggatgacca gcactggcac tyggtcctca ttgagcgggt gggcaagcag 840
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tgctccgaac cacagattgt gcccatcaca tttgtyaact ccagcggcag ctatttgctg 1140
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aaccgcatca cgctcactct ggatgatgaa gcagcaccct cggctccaga cagcacttgg 1440
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<210> 12

<211> 582

<212> PRT

<213> homo sapiens

<220>

<221> VARIANT

<222> (1)...(582)

<223> Xaa = Any Amino Acid

<400> 12

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          20          25          30
Pro Leu Ala Ser Leu Leu Ser Pro Met Ala Phe Ser Ser Ser Ser Asp
          35          40          45
Leu Thr Gly Thr His Ser Pro Ala Gln Leu Asn Trp Arg Val Gly Thr
          50          55          60
Gly Gly Trp Ser Pro Ala Asp Ser Asn Ala Gln Gln Trp Leu Gln Met
65          70          75          80
Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
          85          90          95
Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp
          100          105          110
Thr Gly Arg Asn Trp Lys Gln Tyr Lys Gln Glu Asp Ser Ile Trp Thr
          115          120          125
Phe Ala Gly Asn Met Asn Ala Asp Ser Val Val His His Lys Leu Leu
          130          135          140
His Ser Val Arg Ala Arg Phe Val Arg Phe Val Pro Leu Glu Trp Asn

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145          150          155          160
Pro Ser Gly Lys Ile Gly Met Arg Val Glu Val Tyr Gly Cys Ser Tyr
          165          170          175
Lys Ser Asp Val Ala Asp Phe Asp Gly Arg Ser Ser Leu Leu Tyr Arg
          180          185          190
Phe Asn Gln Lys Leu Met Ser Thr Leu Lys Asp Val Ile Ser Leu Lys
          195          200          205
Phe Lys Ser Met Gln Gly Asp Gly Val Leu Phe His Gly Glu Gly Gln
          210          215          220
Arg Gly Asp His Ile Thr Leu Glu Leu Gln Lys Gly Arg Leu Ala Leu
225          230          235          240
His Leu Asn Leu Gly Asp Ser Lys Ala Arg Leu Ser Ser Ser Leu Pro
          245          250          255
Ser Ala Thr Leu Gly Ser Leu Leu Asp Asp Gln His Trp His Xaa Val
          260          265          270
Leu Ile Glu Arg Val Gly Lys Gln Val Asn Phe Thr Val Asp Lys His
          275          280          285
Thr Gln His Phe Arg Thr Lys Gly Glu Thr Asp Ala Leu Asp Ile Asp
290          295          300
Tyr Glu Leu Ser Phe Gly Gly Ile Pro Val Pro Gly Lys Pro Gly Thr
305          310          315          320
Phe Leu Lys Lys Asn Phe His Gly Cys Ile Glu Asn Leu Tyr Tyr Asn
          325          330          335
Gly Val Asn Ile Ile Xaa Leu Ala Lys Arg Arg Lys His Gln Ile Tyr
          340          345          350
Thr Val Gly Asn Val Thr Phe Ser Cys Ser Glu Pro Gln Ile Val Pro
          355          360          365
Ile Thr Phe Val Asn Ser Ser Gly Ser Tyr Leu Leu Leu Pro Gly Thr
          370          375          380
Pro Gln Ile Asp Gly Leu Ser Val Ser Phe Gln Phe Arg Thr Trp Asn
385          390          395          400
Lys Asp Gly Leu Leu Leu Ser Thr Glu Leu Ser Glu Gly Ser Gly Thr
          405          410          415
Leu Leu Leu Ser Leu Glu Gly Gly Ile Leu Arg Leu Val Ile Gln Lys
          420          425          430
Met Thr Glu Arg Val Ala Glu Ile Leu Thr Gly Ser Asn Leu Asn Asp
          435          440          445
Gly Leu Trp His Ser Val Ser Ile Asn Ala Arg Arg Asn Arg Ile Thr
          450          455          460
Leu Thr Leu Asp Asp Glu Ala Ala Pro Pro Ala Pro Asp Ser Thr Trp
465          470          475          480
Val Gln Ile Tyr Ser Gly Asn Ser Tyr Tyr Phe Gly Gly Val Cys Gln
          485          490          495
Thr Thr Val Asn Met Glu Glu Ala Ala Pro Ser Pro Gly Leu Pro Ser
          500          505          510
Ile Val Thr Ala Val Thr Gln Val Thr Leu Val Pro Pro Ala Thr Thr
          515          520          525
Pro Ser Thr Ser Asn Pro Ala Arg Cys Thr Gly Thr Arg Gly Ile Gln
          530          535          540
Pro Ala Ser Ser Thr Ser Thr Gln Met Ala Ala His Trp Asp Leu
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<210> 13
 <211> 1605
 <212> DNA
 <213> homo sapiens

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 <211> 534
 <212> PRT
 <213> homo sapiens

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 <222> (1)...(534)
 <223> Xaa = Any Amino Acid

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 35 40 45
 Leu Thr Gly Thr His Ser Pro Ala Gln Leu Asn Trp Arg Val Gly Thr
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 Gly Gly Trp Ser Pro Ala Asp Ser Asn Ala Gln Gln Trp Leu Gln Met
 65 70 75 80
 Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg

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Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp					
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Thr Gly Arg Asn Trp Lys Gln Tyr Lys Gln Glu Asp Ser Ile Trp Thr					
	115		120		125
Phe Ala Gly Asn Met Asn Ala Asp Ser Val Val His His Lys Leu Leu					
	130		135		140
His Ser Val Arg Ala Arg Phe Val Arg Phe Val Pro Leu Glu Trp Asn					
	145		150		155
Pro Ser Gly Lys Ile Gly Met Arg Val Glu Val Tyr Gly Cys Ser Tyr					
	165		170		175
Lys Ser Asp Val Ala Asp Phe Asp Gly Arg Ser Ser Leu Leu Tyr Arg					
	180		185		190
Phe Asn Gln Lys Leu Met Ser Thr Leu Lys Asp Val Ile Ser Leu Lys					
	195		200		205
Phe Lys Ser Met Gln Gly Asp Gly Val Leu Phe His Gly Glu Gly Gln					
	210		215		220
Arg Gly Asp His Ile Thr Leu Glu Leu Gln Lys Gly Arg Leu Ala Leu					
	225		230		235
His Leu Asn Leu Gly Asp Ser Lys Ala Arg Leu Ser Ser Ser Leu Pro					
	245		250		255
Ser Ala Thr Leu Gly Ser Leu Leu Asp Asp Gln His Trp His Xaa Val					
	260		265		270
Leu Ile Glu Arg Val Gly Lys Gln Val Asn Phe Thr Val Asp Lys His					
	275		280		285
Thr Gln His Phe Arg Thr Lys Gly Glu Thr Asp Ala Leu Asp Ile Asp					
	290		295		300
Tyr Glu Gly Asn Val Thr Phe Ser Cys Ser Glu Pro Gln Ile Val Pro					
	305		310		315
Ile Thr Phe Val Asn Ser Ser Gly Ser Tyr Leu Leu Leu Pro Gly Thr					
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Pro Gln Ile Asp Gly Leu Ser Val Ser Phe Gln Phe Arg Thr Trp Asn					
	340		345		350
Lys Asp Gly Leu Leu Leu Ser Thr Glu Leu Ser Glu Gly Ser Gly Thr					
	355		360		365
Leu Leu Leu Ser Leu Glu Gly Gly Ile Leu Arg Leu Val Ile Gln Lys					
	370		375		380
Met Thr Glu Arg Val Ala Glu Ile Leu Thr Gly Ser Asn Leu Asn Asp					
	385		390		395
Gly Leu Trp His Ser Val Ser Ile Asn Ala Arg Arg Asn Arg Ile Thr					
	405		410		415
Leu Thr Leu Asp Asp Glu Ala Ala Pro Pro Ala Pro Asp Ser Thr Trp					
	420		425		430
Val Gln Ile Tyr Ser Gly Asn Ser Tyr Tyr Phe Gly Gly Val Cys Gln					
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Thr Thr Val Asn Met Glu Glu Ala Ala Pro Ser Pro Gly Leu Pro Ser					
	450		455		460
Ile Val Thr Ala Val Thr Gln Val Thr Leu Val Pro Pro Ala Thr Thr					
	465		470		475
Pro Ser Thr Ser Asn Pro Ala Arg Cys Thr Gly Thr Arg Gly Ile Gln					
	485		490		495
Pro Ala Ser Ser Thr Ser Thr Gln Met Ala Ala Ala His Trp Asp Leu					
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<210> 15

<211> 2238

<212> DNA

<213> homo sapiens

<400> 15

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<210> 16

<211> 745

<212> PRT

<213> homo sapiens

<220>

<221> VARIANT

<222> (1)...(745)

<223> Xaa = Any Amino Acid

<400> 16

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Pro Leu Ala Ser Leu Leu Ser Pro Met Ala Phe Ser Ser Ser Ser Asp
          35          40          45
Leu Thr Gly Thr His Ser Pro Ala Gln Leu Asn Trp Arg Val Gly Thr
          50          55          60
Gly Gly Trp Ser Pro Ala Asp Ser Asn Ala Gln Gln Trp Leu Gln Met
65          70          75          80
Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
          85          90          95
Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp
          100          105          110
Thr Gly Arg Asn Trp Lys Gln Tyr Lys Gln Glu Asp Ser Ile Trp Thr
          115          120          125
Phe Ala Gly Asn Met Asn Ala Asp Ser Val Val His His Lys Leu Leu
130          135          140
His Ser Val Arg Ala Arg Phe Val Arg Phe Val Pro Leu Glu Trp Asn
145          150          155          160
Pro Ser Gly Lys Ile Gly Met Arg Val Glu Val Tyr Gly Cys Ser Tyr
          165          170          175
Lys Ser Asp Val Ala Asp Phe Asp Gly Arg Ser Ser Leu Leu Tyr Arg
          180          185          190
Phe Asn Gln Lys Leu Met Ser Thr Leu Lys Asp Val Ile Ser Leu Lys
          195          200          205
Phe Lys Ser Met Gln Gly Asp Gly Val Leu Phe His Gly Glu Gly Gln
210          215          220
Arg Gly Asp His Ile Thr Leu Glu Leu Gln Lys Gly Arg Leu Ala Leu
225          230          235          240
His Leu Asn Leu Gly Asp Ser Lys Ala Arg Leu Ser Ser Ser Leu Pro
          245          250          255
Ser Ala Thr Leu Gly Ser Leu Leu Asp Asp Gln His Trp His Xaa Val
          260          265          270
Leu Ile Glu Arg Val Gly Lys Gln Val Asn Phe Thr Val Asp Lys His
          275          280          285
Thr Gln His Phe Arg Thr Lys Gly Glu Thr Asp Ala Leu Asp Ile Asp
          290          295          300
Tyr Glu Leu Ser Phe Gly Gly Ile Pro Val Pro Gly Lys Pro Gly Thr
305          310          315          320
Phe Leu Lys Lys Asn Phe His Gly Cys Ile Glu Asn Leu Tyr Tyr Asn
          325          330          335
Gly Val Asn Ile Ile Xaa Leu Ala Lys Arg Arg Lys His Gln Ile Tyr
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Thr Val Gly Asn Val Thr Phe Ser Cys Ser Glu Pro Gln Ile Val Pro
          355          360          365
Ile Thr Phe Val Asn Ser Ser Gly Ser Tyr Leu Leu Pro Gly Thr
          370          375          380
Pro Gln Ile Asp Gly Leu Ser Val Ser Phe Gln Phe Arg Thr Trp Asn
385          390          395          400
Lys Asp Gly Leu Leu Ser Thr Glu Leu Ser Glu Gly Ser Gly Thr
          405          410          415
Leu Leu Leu Ser Leu Glu Gly Gly Ile Leu Arg Leu Val Ile Gln Lys
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435		440		445
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Leu Thr Leu Asp Asp Glu Ala Ala Pro Pro Ala Pro Asp Ser Thr Trp				
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Val Gln Ile Tyr Ser Gly Asn Ser Tyr Tyr Phe Gly Gly Cys Pro Asp				
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Asn Leu Thr Asp Ser Gln Cys Leu Asn Pro Ile Lys Ala Phe Gln Gly				
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Cys Met Arg Leu Ile Phe Ile Asp Asn Gln Pro Lys Asp Leu Ile Ser				
	515		520	525
Val Gln Gln Gly Ser Leu Gly Asn Phe Ser Asp Leu His Ile Asp Leu				
	530		535	540
Cys Ser Ile Lys Asp Arg Cys Leu Pro Asn Tyr Cys Glu His Gly Gly				
545		550		555
Ser Cys Ser Gln Ser Trp Thr Thr Phe Tyr Cys Asn Cys Ser Asp Thr				
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Ser Tyr Thr Gly Ala Thr Cys His Asn Ser Ile Tyr Glu Gln Ser Cys				
	580		585	590
Glu Val Tyr Arg His Gln Gly Asn Thr Ala Gly Phe Phe Tyr Ile Asp				
	595		600	605
Ser Asp Gly Ser Gly Pro Leu Gly Pro Leu Gln Val Tyr Cys Asn Ile				
610		615		620
Thr Glu Asp Lys Ile Trp Thr Ser Val Gln His Asn Asn Thr Glu Leu				
625		630		635
Thr Arg Val Arg Gly Ala Asn Pro Glu Lys Pro Tyr Ala Met Ala Leu				
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Asp Tyr Gly Gly Ser Met Glu Gln Leu Glu Ala Val Ile Asp Gly Ser				
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Glu His Cys Glu Gln Glu Val Ala Tyr His Cys Arg Arg Ser Arg Leu				
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Leu Asn Thr Pro Asp Gly Thr Pro Phe Thr Trp Trp Ile Gly Arg Ser				
	690		695	700
Asn Glu Arg His Pro Tyr Trp Gly Gly Ser Pro Gly Val Gln Gln				
705		710		715
Cys Glu Cys Gly Leu Asp Glu Ser Cys Leu Asp Ile Gln His Phe Cys				
	725		730	735
Asn Cys Asp Ala Asp Lys Asp Glu Trp				
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<210> 17

<211> 2094

<212> DNA

<213> homo sapiens

<400> 17

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<210> 18

<211> 697

<212> PRT

<213> homo sapiens

<220>

<221> VARIANT

<222> (1)...(697)

<223> Xaa = Any Amino Acid

<400> 18

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Tyr	Gly	Ser	Ser	Asp	Trp	Val	Thr	Ser	Tyr	Ser	Leu	Met	Phe	Ser	Asp
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Thr	Gly	Arg	Asn	Trp	Lys	Gln	Tyr	Lys	Gln	Glu	Asp	Ser	Ile	Trp	Thr
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Lys	Ser	Asp	Val	Ala	Asp	Phe	Asp	Gly	Arg	Ser	Ser	Leu	Leu	Tyr	Arg
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Phe	Asn	Gln	Lys	Leu	Met	Ser	Thr	Leu	Lys	Asp	Val	Ile	Ser	Leu	Lys
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Ser	Ala	Thr	Leu	Gly	Ser	Leu	Leu	Asp	Asp	Gln	His	Trp	His	Xaa	Val
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Val	Gln	Ile	Tyr	Ser	Gly	Asn	Ser	Tyr	Tyr	Phe	Gly	Gly	Cys	Pro	Asp
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Thr	Glu	Asp	Lys	Ile	Trp	Thr	Ser	Val	Gln	His	Asn	Asn	Thr	Glu	Leu
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Thr	Arg	Val	Arg	Gly	Ala	Asn	Pro	Glu	Lys	Pro	Tyr	Ala	Met	Ala	Leu

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625	630	635
Leu Asn Thr Pro Asp Gly Thr Pro Phe Thr Trp Trp Ile Gly Arg Ser		
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Asn Glu Arg His Pro Tyr Trp Gly Gly Ser Pro Pro Gly Val Gln Gln		
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50          55          60
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65          70          75          80
Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
85          90          95
Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp
100         105         110
Thr Gly Arg Asn Trp Lys Gln Tyr Lys Gln Glu Asp Ser Ile Trp Thr
115         120         125
Phe Ala Gly Asn Met Asn Ala Asp Ser Val Val His His Lys Leu Leu
130         135         140
His Ser Val Arg Ala Arg Phe Val Arg Phe Val Pro Leu Glu Trp Asn
145         150         155         160
Pro Ser Gly Lys Ile Gly Met Arg Val Glu Val Tyr Gly Cys Ser Tyr
165         170         175
Lys Ser Asp Val Ala Asp Phe Asp Gly Arg Ser Ser Leu Leu Tyr Arg
180         185         190
Phe Asn Gln Lys Leu Met Ser Thr Leu Lys Asp Val Ile Ser Leu Lys
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Phe Lys Ser Met Gln Gly Asp Gly Val Leu Phe His Gly Glu Gly Gln
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225         230         235         240
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245         250         255
Ser Ala Thr Leu Gly Ser Leu Leu Asp Gln His Trp His Xaa Val
260         265         270
Leu Ile Glu Arg Val Gly Lys Gln Val Asn Phe Thr Val Asp Lys His
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Thr Gln His Phe Arg Thr Lys Gly Glu Thr Asp Ala Leu Asp Ile Asp
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Tyr	Glu	Leu	Ser	Phe	Gly	Gly	Ile	Pro	Val	Pro	Gly	Lys	Pro	Gly	Thr	305	310	315	320
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Thr	Val	Gly	Asn	Val	Thr	Phe	Ser	Cys	Ser	Glu	Pro	Gln	Ile	Val	Pro	355	360	365	
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Leu	Asn	Thr	Pro	Asp	Gly	Thr	Pro	Phe	Thr	Trp	Trp	Ile	Gly	Arg	Ser	690	695	700	
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Cys	Glu	Cys	Gly	Leu	Asp	Glu	Ser	Cys	Leu	Asp	Ile	Gln	His	Phe	Cys	725	730	735	
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Ser Phe Lys Asp His Leu Pro Val Thr Gln Ile Val Ile Thr Asp Thr
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770 775 780
Tyr Gly Asp Arg Glu Tyr Lys Ile Glu Arg Ser Phe Leu Ser Ala Leu
785 790 795 800
His Glu His Lys Met Phe Leu Leu Pro Tyr Pro Phe Ser Leu Gln Cys
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 50 55 60
 Gly Gly Trp Ser Pro Ala Asp Ser Asn Ala Gln Gln Trp Leu Gln Met
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 Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
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 Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp
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 Pro Ser Gly Lys Ile Gly Met Arg Val Glu Val Tyr Gly Cys Ser Tyr
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 Lys Ser Asp Val Ala Asp Phe Asp Gly Arg Ser Ser Leu Leu Tyr Arg
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 Phe Lys Ser Met Gln Gly Asp Gly Val Leu Phe His Gly Glu Gly Gln
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<212> PRT

<213> Homo sapiens

<400> 24

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Leu	Asn	Trp	Arg	Val	Gly	Thr	Gly	Gly	Trp	Ser	Pro	Ala	Asp	Ser	Asn
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Gln	Glu	Asp	Ser	Ile	Trp	Thr	Phe	Ala	Gly	Asn	Met	Asn	Ala	Asp	Ser
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Val	Val	His	His	Lys	Leu	Leu	His	Ser	Val	Arg	Ala	Arg	Phe	Val	Arg
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Phe	Val	Pro	Leu	Glu	Trp	Asn	Pro	Ser	Gly	Lys	Ile	Gly	Met	Arg	Val
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Glu	Val	Tyr	Gly	Cys	Ser	Tyr	Lys	Ser	Asp	Val	Ala	Asp	Phe	Asp	Gly
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Arg	Ser	Ser	Leu	Leu	Tyr	Arg	Phe	Asn	Gln	Lys	Leu	Met	Ser	Thr	Leu
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 Asn Phe Thr Val Asp Lys His Thr Gln His Phe Arg Thr Lys Gly Glu
 275 280 285
 Thr Asp Ala Leu Asp Ile Asp Tyr Glu Leu Ser Phe Gly Gly Ile Pro
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 Val Pro Gly Lys Pro Gly Thr Phe Leu Lys Lys Asn Phe His Gly Cys
 305 310 315 320
 Ile Glu Asn Leu Tyr Tyr Asn Gly Val Asn Ile Ile Asp Leu Ala Lys
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 Arg Arg Lys His Gln Ile Tyr Thr Val Gly Asn Val Thr Phe Ser Cys
 340 345 350
 Ser Glu Pro Gln Ile Val Pro Ile Thr Phe Val Asn Ser Ser Gly Ser
 355 360 365
 Tyr Leu Leu Leu Pro Gly Thr Pro Gln Ile Asp Gly Leu Ser Val Ser
 370 375 380
 Phe Gln Phe Arg Thr Trp Asn Lys Asp Gly Leu Leu Leu Ser Thr Glu
 385 390 395 400
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 405 410 415
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 Ser Ile Tyr Glu Gln Ser Cys Glu Val Tyr Arg His Gln Gly Asn Thr
 580 585 590
 Ala Gly Phe Phe Tyr Ile Asp Ser Asp Gly Ser Gly Pro Leu Gly Pro
 595 600 605
 Leu Gln Val Tyr Cys Asn Ile Thr Glu Asp Lys Ile Trp Thr Ser Val
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 Gln His Asn Asn Thr Glu Leu Thr Arg Val Arg Gly Ala Asn Pro Glu
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 Lys Pro Tyr Ala Met Ala Leu Asp Tyr Gly Gly Ser Met Glu Gln Leu
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 Glu Ala Val Ile Asp Gly Ser Glu His Cys Glu Gln Glu Val Ala Tyr
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 His Cys Arg Arg Ser Arg Leu Leu Asn Thr Pro Asp Gly Thr Pro Phe
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 Ser Gly Val Phe Leu Glu Asn Leu Gly Ile Lys Asp Phe Ile Arg Leu
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 Gly Pro Val Glu Leu Val Val Gln Ser Pro Ser Leu Leu Asn Asp Asn
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 Lys Ala Ala Leu Arg His Ala Thr Val Ala Pro Val Thr Val His Gly
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<212> PRT

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<400> 26

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Ile	Gly	Met	Arg	Val	Glu	Val	Tyr	Gly	Cys	Ser	Tyr	Lys	Ser	Asp	Val
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Ala	Asp	Phe	Asp	Gly	Arg	Ser	Ser	Leu	Leu	Tyr	Arg	Phe	Asn	Gln	Lys
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Leu	Met	Ser	Thr	Leu	Lys	Asp	Val	Ile	Ser	Leu	Lys	Phe	Lys	Ser	Met
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Gln	Gly	Asp	Gly	Val	Leu	Phe	His	Gly	Glu	Gly	Gln	Arg	Gly	Asp	His
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Ile	Thr	Leu	Glu	Leu	Gln	Lys	Gly	Arg	Leu	Ala	Leu	His	Leu	Asn	Leu
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Gly	Asp	Ser	Lys	Ala	Arg	Leu	Ser	Ser	Ser	Leu	Pro	Ser	Ala	Thr	Leu
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Gly	Ser	Leu	Leu	Asp	Asp	Gln	His	Trp	His	Ser	Val	Leu	Ile	Glu	Arg

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His	Leu	Pro	Val	Thr	Gln	Ile	Val	Ile	Thr	Asp	Thr	Asp	Arg	Ser	Asn	
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Ser	Glu	Ala	Ala	Trp	Arg	Ile	Gly	Pro	Leu	Arg	Cys	Tyr	Gly	Asp	Arg	
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Val	Thr	Ser	Gly	Val	Arg	Pro	Gly	Cys	Pro	Gly	His	Cys	Ser	Ser	Tyr	
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Tyr	Leu	Cys	Asp	Cys	Thr	Asn	Ser	Pro	Tyr	Glu	Gly	Pro	Phe	Cys	Lys	
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Phe	Gln	Glu	Pro	Tyr	Pro	Val	Thr	Lys	Asn	Ile	Ser	Leu	Ser	Ser	Ser	
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Ser	Gln	Asp	Phe	Val	Val	Val	Leu	Leu	Cys	Lys	Asn	Gly	Ser	Leu	Gln	
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Ile	Ala	Leu	Ser	Phe	Val	Thr	Thr	Gln	Ala	Pro	Ser	Leu	Leu	Leu	Phe	995	1000	1005	
Ile	Asn	Ser	Ser	Ser	Gln	Asp	Phe	Val	Val	Val	Leu	Leu	Cys	Lys	Asn	1010	1015	1020	
Gly	Ser	Leu	Gln	Val	Arg	Tyr	His	Leu	Asn	Lys	Glu	Glu	Thr	His	Val	1025	1030	1035	1040
Phe	Thr	Ile	Asp	Ala	Asp	Asn	Phe	Ala	Asn	Arg	Arg	Met	His	His	Leu	1045	1050	1055	
Lys	Ile	Asn	Arg	Glu	Gly	Arg	Glu	Leu	Thr	Ile	Gln	Met	Asp	Gln	Gln	1060	1065	1070	
Leu	Arg	Leu	Ser	Tyr	Asn	Phe	Ser	Pro	Glu	Val	Glu	Phe	Arg	Val	Ile	1075	1080	1085	
Arg	Ser	Leu	Thr	Leu	Gly	Lys	Val	Thr	Glu	Asn	Leu	Gly	Leu	Asp	Ser	1090	1095	1100	
Glu	Val	Ala	Lys	Ala	Asn	Ala	Met	Gly	Phe	Ala	Gly	Cys	Met	Ser	Ser	1105	1110	1115	1120
Val	Gln	Tyr	Asn	His	Ile	Ala	Pro	Leu	Lys	Ala	Ala	Leu	Arg	His	Ala	1125	1130	1135	
Thr	Val	Ala	Pro	Val	Thr	Val	His	Gly	Thr	Leu	Thr	Glu	Ser	Ser	Cys	1140	1145	1150	
Gly	Phe	Met	Val	Asp	Ser	Asp	Val	Asn	Ala	Val	Thr	Thr	Val	His	Ser	1155	1160	1165	
Ser	Ser	Asp	Pro	Phe	Gly	Lys	Thr	Asp	Glu	Arg	Glu	Pro	Leu	Thr	Asn	1170	1175	1180	
Ala	Val	Arg	Ser	Asp	Ser	Ala	Val	Ile	Gly	Gly	Val	Ile	Ala	Val	Val	1185	1190	1195	1200
Ile	Phe	Ile	Ile	Phe	Cys	Ile	Ile	Gly	Ile	Met	Thr	Arg	Phe	Leu	Tyr	1205	1210	1215	
Gln	His	Lys	Gln	Ser	His	Arg	Thr	Ser	Gln	Met	Lys	Glu	Lys	Glu	Tyr	1220	1225	1230	

Pro Glu Asn Leu Asp Ser Ser Phe Arg Asn Glu Ile Asp Leu Gln Asn
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 Thr Val Ser Glu Cys Lys Arg Glu Tyr Phe Ile
 1250 1255

<210> 5
 <211> 108
 <212> DNA
 <213> homo sapiens

<400> 5
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<210> 6
 <211> 35
 <212> PRT
 <213> homo sapiens

<400> 6
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 20 25 30
 His Glu Cys
 35

<210> 7
 <211> 753
 <212> DNA
 <213> homo sapiens

<400> 7
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 agagttggaa ctggcgggtg gtcccagca gattccaatg ctcaacagtg gctccagatg 240
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<210> 8
 <211> 250
 <212> PRT
 <213> homo sapiens

<400> 8
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 Gly Leu Trp His Leu Gly Leu Thr Ala Thr Asn Tyr Asn Cys Asp Asp

20	25	30
Pro Leu Ala Ser Leu Leu Ser	Pro Met Ala Phe Ser Ser Ser Ser Asp	
35	40	45
Leu Thr Gly Thr His Ser Pro	Ala Gln Leu Asn Trp Arg Val Gly Thr	
50	55	60
Gly Gly Trp Ser Pro Ala Asp	Ser Asn Ala Gln Trp Leu Gln Met	
65	70	75
Asp Leu Gly Asn Arg Val Glu Ile Thr	Ala Val Ala Thr Gln Gly Arg	
85	90	95
Tyr Gly Ser Ser Asp Trp Val Thr	Ser Tyr Ser Leu Met Phe Ser Asp	
100	105	110
Thr Gly Arg Asn Trp Lys Gln Tyr	Lys Gln Glu Asp Ser Ile Trp Thr	
115	120	125
Phe Ala Gly Asn Met Asn Ala Asp	Ser Val Val His His Lys Leu Leu	
130	135	140
His Ser Val Arg Ala Arg Phe Val	Arg Phe Val Pro Leu Glu Trp Asn	
145	150	155
Pro Ser Gly Lys Ile Gly Met Arg	Val Glu Val Tyr Gly Cys Ser Tyr	
165	170	175
Lys Ser Asp Val Ala Asp Phe Asp	Gly Arg Ser Ser Leu Leu Tyr Arg	
180	185	190
Phe Asn Gln Lys Leu Met Ser Thr	Leu Lys Asp Val Ile Ser Leu Lys	
195	200	205
Phe Lys Ser Met Gln Gly Asp Gly	Val Leu Phe His Gly Glu Gly Gln	
210	215	220
Arg Gly Asp His Ile Thr Leu Glu	Leu Gln Lys Gly Arg Leu Ala Leu	
225	230	235
His Leu Asn Leu Val Val Cys Ser	Ser Pro	
245	250	

<210> 9
 <211> 840
 <212> DNA
 <213> homo sapiens

<400> 9
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 agagttggaa ctggcggttg gtccccagca gattccaatg ctcaacagtg gctccagatg 240
 gacctgggaa acagagtaga gattacagca gtggccacgc aggaagata cggaagctct 300
 gactgggtga cgagttacag cctgatgttc agtgacacag gacgcaactg gaaacagtac 360
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 cacaagctat tgcactcagt gagagccga tttgttcgct ttgtgcccct ggaatggaat 480
 ccagtgggga agattggcat gagagtcgag gtctacggat gtctctataa atcagacgtt 540
 gctgactttg atggccgaag ctcaactctg tacaggttca atcagaagtt gatgagtact 600
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 cacctcaatt tgggtgacag caaagcggg ctaagcactt gccctctgcc accctgggca 780
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<210> 10
 <211> 279
 <212> PRT
 <213> homo sapiens

<220>
 <221> VARIANT
 <222> (1)...(279)
 <223> Xaa = Any Amino Acid

<400> 10

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			20					25					30		
Pro	Leu	Ala	Ser	Leu	Leu	Ser	Pro	Met	Ala	Phe	Ser	Ser	Ser	Ser	Asp
		35					40					45			
Leu	Thr	Gly	Thr	His	Ser	Pro	Ala	Gln	Leu	Asn	Trp	Arg	Val	Gly	Thr
	50					55					60				
Gly	Gly	Trp	Ser	Pro	Ala	Asp	Ser	Asn	Ala	Gln	Gln	Trp	Leu	Gln	Met
65					70				75						80
Asp	Leu	Gly	Asn	Arg	Val	Glu	Ile	Thr	Ala	Val	Ala	Thr	Gln	Gly	Arg
			85					90					95		
Tyr	Gly	Ser	Ser	Asp	Trp	Val	Thr	Ser	Tyr	Ser	Leu	Met	Phe	Ser	Asp
			100					105					110		
Thr	Gly	Arg	Asn	Trp	Lys	Gln	Tyr	Lys	Gln	Glu	Asp	Ser	Ile	Trp	Thr
		115					120					125			
Phe	Ala	Gly	Asn	Met	Asn	Ala	Asp	Ser	Val	Val	His	His	Lys	Leu	Leu
	130					135					140				
His	Ser	Val	Arg	Ala	Arg	Phe	Val	Arg	Phe	Val	Pro	Leu	Glu	Trp	Asn
145					150					155					160
Pro	Ser	Gly	Lys	Ile	Gly	Met	Arg	Val	Glu	Val	Tyr	Gly	Cys	Ser	Tyr
			165					170					175		
Lys	Ser	Asp	Val	Ala	Asp	Phe	Asp	Gly	Arg	Ser	Ser	Leu	Leu	Tyr	Arg
			180					185					190		
Phe	Asn	Gln	Lys	Leu	Met	Ser	Thr	Leu	Lys	Asp	Val	Ile	Ser	Leu	Lys
	195					200						205			
Phe	Lys	Ser	Met	Gln	Gly	Asp	Gly	Val	Leu	Phe	His	Gly	Glu	Gly	Gln
	210				215						220				
Arg	Gly	Asp	His	Ile	Thr	Leu	Glu	Leu	Gln	Lys	Gly	Arg	Leu	Ala	Leu
225					230				235						240
His	Leu	Asn	Leu	Gly	Asp	Ser	Lys	Ala	Arg	Leu	Ser	Thr	Cys	Pro	Leu
			245					250					255		
Pro	Pro	Trp	Ala	Ala	Ser	Trp	Met	Thr	Ser	Thr	Gly	Thr	Xaa	Ser	Ser
			260					265					270		
Leu	Ser	Gly	Trp	Ala	Ser	Arg									
			275												

<210> 11
 <211> 1749
 <212> DNA
 <213> homo sapiens

<400> 11

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atggcttttt	ccagttcctc	agacctcact	ggcactcaca	gcccagctca	actcaactgg	180
agagttggaa	ctggcgggtg	gtccccagca	gattccaatg	ctcaacagtg	gctccagatg	240
gacctgggaa	acagagtaga	gattacagca	gtggccacgc	aggaagata	cggaagctct	300
gactgggtga	cgagttacag	cctgatgttc	agtgacacag	gacgcaactg	gaaacagtac	360
aaacaagaag	acagcatctg	gacctttgca	ggaaacatga	atgctgacag	cgtggtgcac	420

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gctgactttg atggccgaag ctcaattctg tacaggttca atcagaagtt gatgagtact 600
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<210> 12

<211> 582

<212> PRT

<213> homo sapiens

<220>

<221> VARIANT

<222> (1)...(582)

<223> Xaa = Any Amino Acid

<400> 12

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Gly Leu Trp His Leu Gly Leu Thr Ala Thr Asn Tyr Asn Cys Asp Asp
 20          25          30
Pro Leu Ala Ser Leu Leu Ser Pro Met Ala Phe Ser Ser Ser Ser Asp
 35          40          45
Leu Thr Gly Thr His Ser Pro Ala Gln Leu Asn Trp Arg Val Gly Thr
 50          55          60
Gly Gly Trp Ser Pro Ala Asp Ser Asn Ala Gln Gln Trp Leu Gln Met
 65          70          75          80
Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
 85          90          95
Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp
100          105          110
Thr Gly Arg Asn Trp Lys Gln Tyr Lys Gln Glu Asp Ser Ile Trp Thr
115          120          125
Phe Ala Gly Asn Met Asn Ala Asp Ser Val Val His His Lys Leu Leu
130          135          140
His Ser Val Arg Ala Arg Phe Val Arg Phe Val Pro Leu Glu Trp Asn
145          150          155          160
Pro Ser Gly Lys Ile Gly Met Arg Val Glu Val Tyr Gly Cys Ser Tyr

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<212> DNA
<213> homo sapiens

<400> 13

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agagttggaa ctggcggttg gtccccagca gattccaatg ctcaacagtg gctccagatg    240
gacctgggaa acagagtaga gattacagca gtggccacgc agggaagata cggaagctct    300
gactgggtga cgagttacag cctgatgttc agtgacacag gacgcaactg gaaacagtac    360
aaacaagaag acagcatctg gacctttgca ggaaacatga atgctgacag cgtgggtgcac    420
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ccatctacga gcaatcctgc gaggtgtaca ggcaccaggg gaatacagcc ggcttcttct   1500
acatcgactc agatggcagc ggcccactgg gacctctcca ggtgtactgc aatatcactg   1560
aggacaagat ctggacatca gtgcagcaca acaatacaga gctga                1605
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<210> 14

<211> 534

<212> PRT

<213> homo sapiens

<220>

<221> VARIANT

<222> (1)...(534)

<223> Xaa = Any Amino Acid

<400> 14

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Gly Leu Trp His Leu Gly Leu Thr Ala Thr Asn Tyr Asn Cys Asp Asp
      20             25             30
Pro Leu Ala Ser Leu Leu Ser Pro Met Ala Phe Ser Ser Ser Ser Asp
      35             40             45
Leu Thr Gly Thr His Ser Pro Ala Gln Leu Asn Trp Arg Val Gly Thr
      50             55             60
Gly Gly Trp Ser Pro Ala Asp Ser Asn Ala Gln Gln Trp Leu Gln Met
      65             70             75             80
Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
      85             90             95
Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp
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<210> 15
<211> 2238
<212> DNA
<213> homo sapiens

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<400> 15
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atggcttttt ccagttcctc agacctcact ggcactcaca gccagctca actcaactgg    180
agagttggaa ctggcgggtg gtccccagca gattccaatg ctcaacagtg gctccagatg    240
gacctgggaa acagagtaga gattacagca gtggccacgc aggaagata cggaagctct    300
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cccagtgga agattggcat gagagtcgag gtctacggat gttcctataa atcagacgtt    540
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tgctccgaac cacagattgt gcccatcaca tttgtyaact ccagcggcag ctatttgctg   1140
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ctcacaggca gcaacttgaa tgatggcctg tggcactcgg ttagcatcaa cgccaggagg   1380
aaccgcatca cgtcactct ggatgatgaa gcagcaccoc cggctccaga cagcacttgg   1440
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cacattgatc tgtgtagcat caaagacagg tgtttgccaa actactgtga acatggagga   1680
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gccacctgcc acaactccat ctacgagcaa tcctgcgagg tgtacaggca ccaggggaat   1800
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tactgcaata tcaactgagga caagatctgg acatcagtg agcacaacaa tacagagctg   1920
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agcatggaac agctggaggc cgtgatcgac ggctctgagc actgtgagca ggaggtggcc   2040
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<210> 16
<211> 745
<212> PRT
<213> homo sapiens

<220>
<221> VARIANT
<222> (1)...(745)
<223> Xaa = Any Amino Acid

<400> 16

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Gly	Leu	Trp	His	Leu	Gly	Leu	Thr	Ala	Thr	Asn	Tyr	Asn	Cys	Asp	Asp	20	25	30	
Pro	Leu	Ala	Ser	Leu	Leu	Ser	Pro	Met	Ala	Phe	Ser	Ser	Ser	Ser	Asp	35	40	45	
Leu	Thr	Gly	Thr	His	Ser	Pro	Ala	Gln	Leu	Asn	Trp	Arg	Val	Gly	Thr	50	55	60	
Gly	Gly	Trp	Ser	Pro	Ala	Asp	Ser	Asn	Ala	Gln	Gln	Trp	Leu	Gln	Met	65	70	75	80
Asp	Leu	Gly	Asn	Arg	Val	Glu	Ile	Thr	Ala	Val	Ala	Thr	Gln	Gly	Arg	85	90	95	
Tyr	Gly	Ser	Ser	Asp	Trp	Val	Thr	Ser	Tyr	Ser	Leu	Met	Phe	Ser	Asp	100	105	110	
Thr	Gly	Arg	Asn	Trp	Lys	Gln	Tyr	Lys	Gln	Glu	Asp	Ser	Ile	Trp	Thr	115	120	125	
Phe	Ala	Gly	Asn	Met	Asn	Ala	Asp	Ser	Val	Val	His	His	Lys	Leu	Leu	130	135	140	
His	Ser	Val	Arg	Ala	Arg	Phe	Val	Arg	Phe	Val	Pro	Leu	Glu	Trp	Asn	145	150	155	160
Pro	Ser	Gly	Lys	Ile	Gly	Met	Arg	Val	Glu	Val	Tyr	Gly	Cys	Ser	Tyr	165	170	175	
Lys	Ser	Asp	Val	Ala	Asp	Phe	Asp	Gly	Arg	Ser	Ser	Leu	Leu	Tyr	Arg	180	185	190	
Phe	Asn	Gln	Lys	Leu	Met	Ser	Thr	Leu	Lys	Asp	Val	Ile	Ser	Leu	Lys	195	200	205	
Phe	Lys	Ser	Met	Gln	Gly	Asp	Gly	Val	Leu	Phe	His	Gly	Glu	Gly	Gln	210	215	220	
Arg	Gly	Asp	His	Ile	Thr	Leu	Glu	Leu	Gln	Lys	Gly	Arg	Leu	Ala	Leu	225	230	235	240
His	Leu	Asn	Leu	Gly	Asp	Ser	Lys	Ala	Arg	Leu	Ser	Ser	Ser	Leu	Pro	245	250	255	
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Leu	Ile	Glu	Arg	Val	Gly	Lys	Gln	Val	Asn	Phe	Thr	Val	Asp	Lys	His	275	280	285	
Thr	Gln	His	Phe	Arg	Thr	Lys	Gly	Glu	Thr	Asp	Ala	Leu	Asp	Ile	Asp	290	295	300	
Tyr	Glu	Leu	Ser	Phe	Gly	Gly	Ile	Pro	Val	Pro	Gly	Lys	Pro	Gly	Thr	305	310	315	320
Phe	Leu	Lys	Lys	Asn	Phe	His	Gly	Cys	Ile	Glu	Asn	Leu	Tyr	Tyr	Asn	325	330	335	
Gly	Val	Asn	Ile	Ile	Xaa	Leu	Ala	Lys	Arg	Arg	Lys	His	Gln	Ile	Tyr	340	345	350	
Thr	Val	Gly	Asn	Val	Thr	Phe	Ser	Cys	Ser	Glu	Pro	Gln	Ile	Val	Pro	355	360	365	
Ile	Thr	Phe	Val	Asn	Ser	Ser	Gly	Ser	Tyr	Leu	Leu	Leu	Pro	Gly	Thr	370	375	380	
Pro	Gln	Ile	Asp	Gly	Leu	Ser	Val	Ser	Phe	Gln	Phe	Arg	Thr	Trp	Asn	385	390	395	400
Lys	Asp	Gly	Leu	Leu	Leu	Ser	Thr	Glu	Leu	Ser	Glu	Gly	Ser	Gly	Thr	405	410	415	
Leu	Leu	Leu	Ser	Leu	Glu	Gly	Gly	Ile	Leu	Arg	Leu	Val	Ile	Gln	Lys	420	425	430	
Met	Thr	Glu	Arg	Val	Ala	Glu	Ile	Leu	Thr	Gly	Ser	Asn	Leu	Asn	Asp	435	440	445	

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 Leu Thr Leu Asp Asp Glu Ala Ala Pro Pro Ala Pro Asp Ser Thr Trp
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 Val Gln Ile Tyr Ser Gly Asn Ser Tyr Tyr Phe Gly Gly Cys Pro Asp
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 Asn Leu Thr Asp Ser Gln Cys Leu Asn Pro Ile Lys Ala Phe Gln Gly
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 Cys Met Arg Leu Ile Phe Ile Asp Asn Gln Pro Lys Asp Leu Ile Ser
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 Val Gln Gln Gly Ser Leu Gly Asn Phe Ser Asp Leu His Ile Asp Leu
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<211> 2094

<212> DNA

<213> homo sapiens

<400> 17

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gctgactttg	atggccgaag	ctcacttctg	tacaggttca	atcagaagtt	gatgagtact	600
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<211> 697

<212> PRT

<213> homo sapiens

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<222> (1)...(697)

<223> Xaa = Any Amino Acid

<400> 18

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Pro Leu Ala Ser Leu Leu Ser Pro Met Ala Phe Ser Ser Ser Ser Asp
 35             40             45
Leu Thr Gly Thr His Ser Pro Ala Gln Leu Asn Trp Arg Val Gly Thr
 50             55             60
Gly Gly Trp Ser Pro Ala Asp Ser Asn Ala Gln Gln Trp Leu Gln Met
 65             70             75             80
Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
 85             90             95
Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp
 100            105            110
Thr Gly Arg Asn Trp Lys Gln Tyr Lys Gln Glu Asp Ser Ile Trp Thr
 115            120            125
Phe Ala Gly Asn Met Asn Ala Asp Ser Val Val His His Lys Leu Leu
 130            135            140
His Ser Val Arg Ala Arg Phe Val Arg Phe Val Pro Leu Glu Trp Asn
 145            150            155            160

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Pro	Ser	Gly	Lys	Ile	Gly	Met	Arg	Val	Glu	Val	Tyr	Gly	Cys	Ser	Tyr	165	170	175
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Phe	Asn	Gln	Lys	Leu	Met	Ser	Thr	Leu	Lys	Asp	Val	Ile	Ser	Leu	Lys	195	200	205
Phe	Lys	Ser	Met	Gln	Gly	Asp	Gly	Val	Leu	Phe	His	Gly	Glu	Gly	Gln	210	215	220
Arg	Gly	Asp	His	Ile	Thr	Leu	Glu	Leu	Gln	Lys	Gly	Arg	Leu	Ala	Leu	225	230	235
His	Leu	Asn	Leu	Gly	Asp	Ser	Lys	Ala	Arg	Leu	Ser	Ser	Ser	Leu	Pro	245	250	255
Ser	Ala	Thr	Leu	Gly	Ser	Leu	Leu	Asp	Asp	Gln	His	Trp	His	Xaa	Val	260	265	270
Leu	Ile	Glu	Arg	Val	Gly	Lys	Gln	Val	Asn	Phe	Thr	Val	Asp	Lys	His	275	280	285
Thr	Gln	His	Phe	Arg	Thr	Lys	Gly	Glu	Thr	Asp	Ala	Leu	Asp	Ile	Asp	290	295	300
Tyr	Glu	Gly	Asn	Val	Thr	Phe	Ser	Cys	Ser	Glu	Pro	Gln	Ile	Val	Pro	305	310	315
Ile	Thr	Phe	Val	Asn	Ser	Ser	Gly	Ser	Tyr	Leu	Leu	Leu	Pro	Gly	Thr	320	325	330
Pro	Gln	Ile	Asp	Gly	Leu	Ser	Val	Ser	Phe	Gln	Phe	Arg	Thr	Trp	Asn	335	340	345
Lys	Asp	Gly	Leu	Leu	Leu	Ser	Thr	Glu	Leu	Ser	Glu	Gly	Ser	Gly	Thr	350	355	360
Leu	Leu	Leu	Ser	Leu	Glu	Gly	Gly	Ile	Leu	Arg	Leu	Val	Ile	Gln	Lys	365	370	375
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Gly	Leu	Trp	His	Ser	Val	Ser	Ile	Asn	Ala	Arg	Arg	Asn	Arg	Ile	Thr	395	400	405
Leu	Thr	Leu	Asp	Asp	Glu	Ala	Ala	Pro	Pro	Ala	Pro	Asp	Ser	Thr	Trp	410	415	420
Val	Gln	Ile	Tyr	Ser	Gly	Asn	Ser	Tyr	Tyr	Phe	Gly	Gly	Cys	Pro	Asp	425	430	435
Asn	Leu	Thr	Asp	Ser	Gln	Cys	Leu	Asn	Pro	Ile	Lys	Ala	Phe	Gln	Gly	440	445	450
Cys	Met	Arg	Leu	Ile	Phe	Ile	Asp	Asn	Gln	Pro	Lys	Asp	Leu	Ile	Ser	455	460	465
Val	Gln	Gln	Gly	Ser	Leu	Gly	Asn	Phe	Ser	Asp	Leu	His	Ile	Asp	Leu	470	475	480
Cys	Ser	Ile	Lys	Asp	Arg	Cys	Leu	Pro	Asn	Tyr	Cys	Glu	His	Gly	Gly	485	490	495
Ser	Cys	Ser	Gln	Ser	Trp	Thr	Thr	Phe	Tyr	Cys	Asn	Cys	Ser	Asp	Thr	500	505	510
Ser	Tyr	Thr	Gly	Ala	Thr	Cys	His	Asn	Ser	Ile	Tyr	Glu	Gln	Ser	Cys	515	520	525
Glu	Val	Tyr	Arg	His	Gln	Gly	Asn	Thr	Ala	Gly	Phe	Phe	Tyr	Ile	Asp	530	535	540
Ser	Asp	Gly	Ser	Gly	Pro	Leu	Gly	Pro	Leu	Gln	Val	Tyr	Cys	Asn	Ile	545	550	555
Thr	Glu	Asp	Lys	Ile	Trp	Thr	Ser	Val	Gln	His	Asn	Asn	Thr	Glu	Leu	560	565	570
Thr	Arg	Val	Arg	Gly	Ala	Asn	Pro	Glu	Lys	Pro	Tyr	Ala	Met	Ala	Leu	575	580	585
																590	595	600

Asp Tyr Gly Gly Ser Met Glu Gln Leu Glu Ala Val Ile Asp Gly Ser
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 Glu His Cys Glu Gln Glu Val Ala Tyr His Cys Arg Arg Ser Arg Leu
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 645 650 655
 Asn Glu Arg His Pro Tyr Trp Gly Gly Ser Pro Pro Gly Val Gln Gln
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 Asn Cys Asp Ala Asp Lys Asp Glu Trp
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50      55      60
Gly Gly Trp Ser Pro Ala Asp Ser Asn Ala Gln Gln Trp Leu Gln Met
65      70      75      80
Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
85      90      95
Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp
100     105     110
Thr Gly Arg Asn Trp Lys Gln Tyr Lys Gln Glu Asp Ser Ile Trp Thr
115     120     125
Phe Ala Gly Asn Met Asn Ala Asp Ser Val Val His His Lys Leu Leu
130     135     140
His Ser Val Arg Ala Arg Phe Val Arg Phe Val Pro Leu Glu Trp Asn
145     150     155     160
Pro Ser Gly Lys Ile Gly Met Arg Val Glu Val Tyr Gly Cys Ser Tyr
165     170     175
Lys Ser Asp Val Ala Asp Phe Asp Gly Arg Ser Ser Leu Leu Tyr Arg
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Phe Asn Gln Lys Leu Met Ser Thr Leu Lys Asp Val Ile Ser Leu Lys
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Phe Lys Ser Met Gln Gly Asp Gly Val Leu Phe His Gly Glu Gly Gln
210     215     220
Arg Gly Asp His Ile Thr Leu Glu Leu Gln Lys Gly Arg Leu Ala Leu
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His Leu Asn Leu Gly Asp Ser Lys Ala Arg Leu Ser Ser Ser Leu Pro
245     250     255
Ser Ala Thr Leu Gly Ser Leu Leu Asp Asp Gln His Trp His Xaa Val
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290     295     300
Tyr Glu Leu Ser Phe Gly Gly Ile Pro Val Pro Gly Lys Pro Gly Thr

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 Asn Cys Asp Ala Asp Lys Asp Glu Trp Thr Asn Asp Thr Gly Phe Leu
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 Ser Phe Lys Asp His Leu Pro Val Thr Gln Ile Val Ile Thr Asp Thr

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Tyr Gly Asp Arg Glu Tyr Lys Ile Glu Arg Ser Phe Leu Ser Ala Leu		
785	790	795
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	805	810
		815
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Thr Glu Asn Asp Lys Pro Cys		
835		

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 Asp Leu Gly Asn Arg Val Glu Ile Thr Ala Val Ala Thr Gln Gly Arg
 85 90 95
 Tyr Gly Ser Ser Asp Trp Val Thr Ser Tyr Ser Leu Met Phe Ser Asp
 100 105 110
 Thr Gly Arg Asn Trp Lys Gln Tyr Lys Gln Glu Asp Ser Ile Trp Thr
 115 120 125
 Phe Ala Gly Asn Met Asn Ala Asp Ser Val Val His His Lys Leu Leu
 130 135 140
 His Ser Val Arg Ala Arg Phe Val Arg Phe Val Pro Leu Glu Trp Asn
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 Pro Ser Gly Lys Ile Gly Met Arg Val Glu Val Tyr Gly Cys Ser Tyr
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 Lys Ser Asp Val Ala Asp Phe Asp Gly Arg Ser Ser Leu Leu Tyr Arg
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 Phe Asn Gln Lys Leu Met Ser Thr Leu Lys Asp Val Ile Ser Leu Lys
 195 200 205
 Phe Lys Ser Met Gln Gly Asp Gly Val Leu Phe His Gly Glu Gly Gln
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 Arg Gly Asp His Ile Thr Leu Glu Leu Gln Lys Gly Arg Leu Ala Leu
 225 230 235 240
 His Leu Asn Leu Gly Asp Ser Lys Ala Arg Leu Ser Ser Ser Leu Pro
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 Ser Ala Thr Leu Gly Ser Leu Leu Asp Asp Gln His Trp His Xaa Val
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 Leu Ile Glu Arg Val Gly Lys Gln Val Asn Phe Thr Val Asp Lys His
 275 280 285
 Thr Gln His Phe Arg Thr Lys Gly Glu Thr Asp Ala Leu Asp Ile Asp
 290 295 300
 Tyr Glu Gly Asn Val Thr Phe Ser Cys Ser Glu Pro Gln Ile Val Pro
 305 310 315 320
 Ile Thr Phe Val Asn Ser Ser Gly Ser Tyr Leu Leu Leu Pro Gly Thr
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Pro	Gln	Ile	Asp	Gly	Leu	Ser	Val	Ser	Phe	Gln	Phe	Arg	Thr	Trp	Asn	
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Lys	Asp	Gly	Leu	Leu	Leu	Ser	Thr	Glu	Leu	Ser	Glu	Gly	Ser	Gly	Thr	
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Met	Thr	Glu	Arg	Val	Ala	Glu	Ile	Leu	Thr	Gly	Ser	Asn	Leu	Asn	Asp	
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			405						410					415		
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Cys	Ser	Ile	Lys	Asp	Arg	Cys	Leu	Pro	Asn	Tyr	Cys	Glu	His	Gly	Gly	
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Ser	Cys	Ser	Gln	Ser	Trp	Thr	Thr	Phe	Tyr	Cys	Asn	Cys	Ser	Asp	Thr	
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Thr	Arg	Val	Arg	Gly	Ala	Asn	Pro	Glu	Lys	Pro	Tyr	Ala	Met	Ala	Leu	
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Asp	Tyr	Gly	Gly	Ser	Met	Glu	Gln	Leu	Glu	Ala	Val	Ile	Asp	Gly	Ser	
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Glu	His	Cys	Glu	Gln	Glu	Val	Ala	Tyr	His	Cys	Arg	Arg	Ser	Arg	Leu	
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Cys	Glu	Cys	Gly	Leu	Asp	Glu	Ser	Cys	Leu	Asp	Ile	Gln	His	Phe	Cys	
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Ser	Phe	Lys	Asp	His	Leu	Pro	Val	Thr	Gln	Ile	Val	Ile	Thr	Asp	Thr	
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Asp	Arg	Ser	Asn	Ser	Glu	Ala	Ala	Trp	Arg	Ile	Gly	Pro	Leu	Arg	Cys	
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His	Glu	His	Lys	Met	Phe	Leu	Leu	Pro	Tyr	Pro	Phe	Ser	Leu	Gln	Cys	
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<212> DNA
<213> Homo sapiens

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 <213> Homo sapiens

<400> 24

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		20					25						30		
Ala	Phe	Ser	Ser	Ser	Ser	Asp	Leu	Thr	Gly	Thr	His	Ser	Pro	Ala	Gln
		35					40					45			
Leu	Asn	Trp	Arg	Val	Gly	Thr	Gly	Gly	Trp	Ser	Pro	Ala	Asp	Ser	Asn
	50				55					60					
Ala	Gln	Gln	Trp	Leu	Gln	Met	Asp	Leu	Gly	Asn	Arg	Val	Glu	Ile	Thr
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Ala	Val	Ala	Thr	Gln	Gly	Arg	Tyr	Gly	Ser	Ser	Asp	Trp	Val	Thr	Ser
			85						90					95	
Tyr	Ser	Leu	Met	Phe	Ser	Asp	Thr	Gly	Arg	Asn	Trp	Lys	Gln	Tyr	Lys
		100						105					110		
Gln	Glu	Asp	Ser	Ile	Trp	Thr	Phe	Ala	Gly	Asn	Met	Asn	Ala	Asp	Ser
		115					120					125			
Val	Val	His	His	Lys	Leu	Leu	His	Ser	Val	Arg	Ala	Arg	Phe	Val	Arg
	130					135					140				
Phe	Val	Pro	Leu	Glu	Trp	Asn	Pro	Ser	Gly	Lys	Ile	Gly	Met	Arg	Val
145				150						155				160	
Glu	Val	Tyr	Gly	Cys	Ser	Tyr	Lys	Ser	Asp	Val	Ala	Asp	Phe	Asp	Gly
			165					170						175	
Arg	Ser	Ser	Leu	Leu	Tyr	Arg	Phe	Asn	Gln	Lys	Leu	Met	Ser	Thr	Leu
		180						185					190		
Lys	Asp	Val	Ile	Ser	Leu	Lys	Phe	Lys	Ser	Met	Gln	Gly	Asp	Gly	Val
	195					200						205			
Leu	Phe	His	Gly	Glu	Gly	Gln	Arg	Gly	Asp	His	Ile	Thr	Leu	Glu	Leu
	210					215					220				
Gln	Lys	Gly	Arg	Leu	Ala	Leu	His	Leu	Asn	Leu	Gly	Asp	Ser	Lys	Ala
225				230						235				240	
Arg	Leu	Ser	Ser	Ser	Leu	Pro	Ser	Ala	Thr	Leu	Gly	Ser	Leu	Leu	Asp

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Ser Pro Pro Gly Val Gln Gln Cys Glu Cys Gly Leu Asp Glu Ser Cys				
705	710		715	720
Leu Asp Ile Gln His Phe Cys Asn Cys Asp Ala Asp Lys Asp Glu Trp				
	725		730	735
Thr Asn Asp Thr Gly Phe Leu Ser Phe Lys Asp His Leu Pro Val Thr				
	740		745	750
Gln Ile Val Ile Thr Asp Thr Asp Arg Ser Asn Ser Glu Ala Ala Trp				
	755		760	765
Arg Ile Gly Pro Leu Arg Cys Tyr Gly Asp Arg Arg Phe Trp Asn Ala				
	770		775	780
Val Ser Phe Tyr Thr Glu Ala Ser Tyr Leu His Phe Pro Thr Phe His				
	785		790	795
Ala Glu Phe Ser Ala Asp Ile Ser Phe Phe Phe Lys Thr Thr Ala Leu				
	805		810	815
Ser Gly Val Phe Leu Glu Asn Leu Gly Ile Lys Asp Phe Ile Arg Leu				
	820		825	830
Glu Ile Ser Ser Pro Ser Glu Ile Thr Phe Ala Ile Asp Val Gly Asn				
	835		840	845
Gly Pro Val Glu Leu Val Val Gln Ser Pro Ser Leu Leu Asn Asp Asn				
	850		855	860
Gln Trp His Tyr Val Arg Ala Glu Arg Asn Leu Lys Glu Thr Ser Leu				
	865		870	875
Gln Val Asp Asn Leu Pro Arg Ser Thr Arg Glu Thr Ser Glu Glu Gly				
	885		890	895
His Phe Arg Leu Gln Leu Asn Ser Gln Leu Phe Val Gly Gly Thr Ser				
	900		905	910
Ser Arg Gln Lys Gly Phe Leu Gly Cys Ile Arg Ser Leu His Leu Asn				
	915		920	925
Gly Gln Lys Met Asp Leu Glu Glu Arg Ala Lys Val Thr Ser Gly Val				
	930		935	940
Arg Pro Gly Cys Pro Gly His Cys Ser Ser Tyr Gly Ser Ile Cys His				
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Asn Gly Gly Lys Cys Val Glu Lys His Asn Gly Tyr Leu Cys Asp Cys				
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Thr Asn Ser Pro Tyr Glu Gly Pro Phe Cys Lys Lys Glu Val Ser Ala				
	980		985	990
Val Phe Glu Ala Gly Thr Ser Val Thr Tyr Met Phe Gln Glu Pro Tyr				
	995		1000	1005
Pro Val Thr Lys Asn Ile Ser Leu Ser Ser Ser Ala Ile Tyr Thr Asp				
	1010		1015	1020
Ser Ala Pro Ser Lys Glu Asn Ile Ala Leu Ser Phe Val Thr Thr Gln				
	1025		1030	1035
Ala Pro Ser Leu Leu Leu Phe Ile Asn Ser Ser Ser Gln Asp Phe Val				
	1045		1050	1055
Val Val Leu Leu Cys Lys Asn Gly Ser Leu Gln Val Arg Tyr His Leu				
	1060		1065	1070
Asn Lys Glu Thr His Val Phe Thr Ile Asp Ala Asp Asn Phe Ala				
	1075		1080	1085
Asn Arg Arg Met His His Leu Lys Ile Asn Arg Glu Gly Arg Glu Leu				
	1090		1095	1100
Thr Ile Gln Met Asp Gln Gln Leu Arg Leu Ser Tyr Asn Phe Ser Pro				
	1105		1110	1115
Glu Val Glu Phe Arg Val Ile Arg Ser Leu Thr Leu Gly Lys Val Thr				
	1125		1130	1135
Glu Asn Leu Gly Leu Asp Ser Glu Val Ala Lys Ala Asn Ala Met Gly				

1140	1145	1150
Phe Ala Gly Cys Met Ser Ser Val Gln Tyr Asn His Ile Ala Pro Leu		
1155	1160	1165
Lys Ala Ala Leu Arg His Ala Thr Val Ala Pro Val Thr Val His Gly		
1170	1175	1180
Thr Leu Thr Glu Ser Ser Cys Gly Phe Met Val Asp Ser Asp Val Asn		
1185	1190	1195
Ala Val Thr Thr Val His Ser Ser Ser Asp Pro Phe Gly Lys Thr Asp		1200
1205	1210	1215
Glu Arg Glu Pro Leu Thr Asn Ala Val Arg Ser Asp Ser Ala Val Ile		
1220	1225	1230
Gly Gly Val Ile Ala Val Val Ile Phe Ile Ile Phe Cys Ile Ile Gly		
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Gln Met Lys Glu Lys Glu Tyr Pro Glu Asn Leu Asp Ser Ser Phe Arg		
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Phe Ile

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<211> 3528

<212> DNA

<213> Homo sapiens

<400> 25

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<211> 1175

<212> PRT

<213> Homo sapiens

<400> 26

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Gly	Ser	Leu	Leu	Asp	Asp	Gln	His	Trp	His	Ser	Val	Leu	Ile	Glu	Arg
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